

10/5339,393 7

Rec'd PCT/PTO 03 MAY 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number  
WO 2004/043112 A1

(51) International Patent Classification<sup>7</sup>: H04R 1/00

(21) International Application Number:  
PCT/US2003/002818

(22) International Filing Date: 30 January 2003 (30.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10/287,273 4 November 2002 (04.11.2002) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:  
US 10/287,273 (CON)  
Filed on 4 November 2002 (04.11.2002)

(71) Applicants and

(72) Inventors: MACKIN, Ian, J. [US/US]; 301 Hillcrest Drive, Belmont, NC 28012 (US). WEIR, William, L. [US/US]; 9319 Wedgewood Drive Extension, Huntersville, NC 28078 (US).

(74) Agents: SUMMA, Philip et al.; Summa & Allan, P.A., Suite 200, 11610 North Community House Road, Charlotte, NC 28277 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

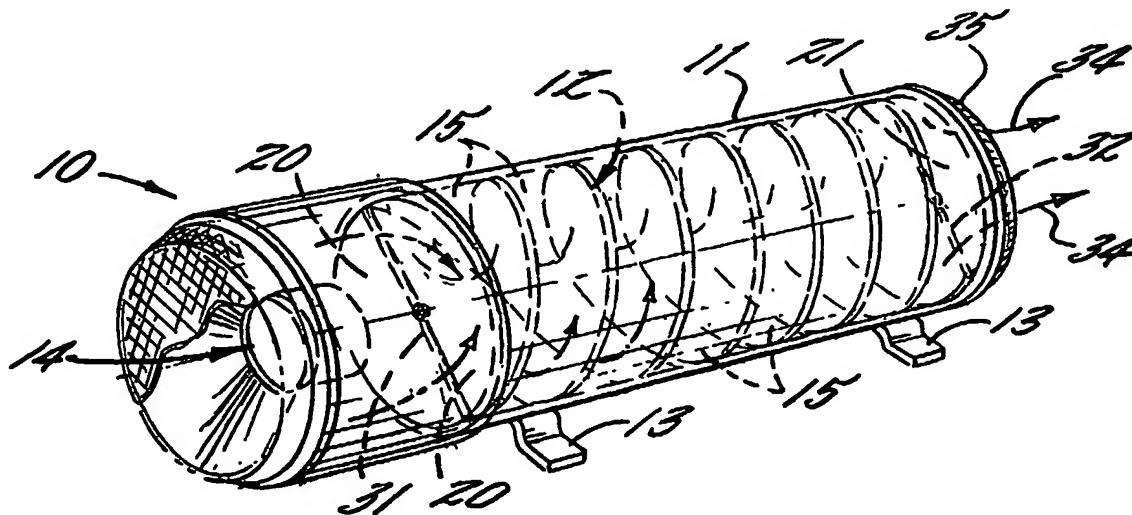
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: APPARATUS FOR INCREASING THE QUALITY OF SOUND FROM AN ACOUSTIC SOURCE



WO 2004/043112 A1

(57) Abstract: An apparatus for increasing the quality of sound from an acoustic source comprises in one embodiment a hollow enclosure, an acoustic source, an acoustic guide, a pair of acoustic inlet openings, a pair of acoustic exit openings, and pair of acoustic paths, wherein the acoustic inlet openings separate acoustic waves from the acoustic source and direct the acoustic waves the length of the acoustic paths to the acoustic exit openings in such a manner as to increase the quality of sound, and especially bass sound, from the acoustic source.